

## CBM PREP FOR MATE NODE 1 NADIR

### OBJECTIVE:

Activate and check out Node 1 Nadir Active Common Berthing Mechanism (ACBM) and deploy capture latches.

### LOCATION:

NOD1/AFD PCS

### DURATION:

TBD

### REFERENCED PROCEDURE(S):

None

- TBD
1. VERIFY APCU POWER ON  
√APCU 1,2 CONVERTER TBD - gray  
√APCU 1,2 OUTPUT TBD - gray

#### NOTE

CBM RT FDIR is disabled during CBM operations to prevent switching between 1553 bus channels due to a CBM RT failure.

- PCS
2. INHIBIT NADIR CBM PRIMARY RT FDIR  
Node 1: CDH  

Node 1: C&DH

  
sel N1-1  
  

Secondary NCS MDM Node 1

  
sel UB ORB N1 1  
sel RT Status  
  

UB Orb RT Status

  
sel Inhib FDIR RT Commands  
  

N1 1 MDM UB ORB N1 1 Inhib FDIR

  
**cmd** Inhib FDIR CBM N1 Nad Prim **Execute**  
  

UB Orb RT Status

  
√RT FDIR Inhibited Number 17 - X

PCS

3. INHIBIT NADIR CBM SECONDARY RT FDIR

Node 1: CDH

Node 1: C&DH

sel N1-2

Primary NCS MDM Node 1

sel UB ORB N1 2

sel RT Status

UB Orb RT Status

sel Inhib FDIR RT Commands

N1 2 MDM UB ORB N1 2 Inhib FDIR

**cmd** Inhib FDIR CBM N1 Nad Sec **Execute**

UB Orb RT Status

√RT FDIR Inhibited Number 17 - X

PCS

4. CLOSE PRIMARY RPCs

Node 1: S&M: Nadir CBM

Node 1 Nadir CBM Display

'Command Sets'

sel Prep for Mate

Node 1 Nadir CBM Prep for Mate

sel RPC 03

RPCM N13B B RPC 03

**cmd** Close **Execute**

√Position - Close

Node 1 Nadir CBM Prep for Mate

sel RPC 04

RPCM N13B B RPC 04

**cmd** Close **Execute**

√Position - Close

Node 1 Nadir CBM Prep for Mate

sel RPC 05

RPCM N13B B RPC 05

**cmd Close Execute**

√Position - Close

Node 1 Nadir CBM Prep for Mate

sel RPC 06

RPCM N13B B RPC 06

**cmd Close Execute**

√Position - Close

5. ACTIVATE NADIR CBM PRIMARY MASTER CONTROLLER

Node 1 Nadir CBM Prep for Mate

sel Activate Primary Master

Node 1 Nadir CBM Act Pri Master

**cmd Activate Primary**

√Mode - Activated

√Master - Primary

√Master Cmd Status - Complete

√Comm Error - No X

sel Built-In Test Failures

Node 1 Active CBM Built In Test Failures

√No Xs

6. SET CONTROLLER POSITIONS ZERO

NOTE

Command should be issued to use currently active RS-485 bus channel (A or B.) Active channel is indicated in "485 Channel" telemetry field.

Node 1 Nadir CBM Prep for Mate

sel Initialize Controller Positions

Node 1 CBM Initialize Controller Positions

**cmd** Set All Positions to Zero Bus "X"  
√Master Cmd Status - Complete

**cmd** Built-In Test  
√Confirmation Request - Built-In Test

**cmd** Confirm Cmd  
√Master Cmd Status - Complete  
√Bolt Cmd Code (sixteen) - Built-In Test  
√Latch Cmd Code (four) - Built-In Test  
√Bolt Cmd Status (sixteen) - Complete  
√Latch Cmd Status (four) - Complete  
√Bolt Posn (sixteen): 0  
√Latch Posn (four): 0

sel Built-In Test Failures

Node 1 Active CBM Built In Test Failures

√No Xs

7. TEST BOLT DRIVE

Node 1 Nadir CBM Prep for Mate

sel Berthing Bolt Check

Node 1 CBM Berthing Bolt Check

**cmd** Bboltck  
Wait 90 seconds.  
√Master Cmd Status - Complete  
√Bolt Cmd Code (sixteen) - BBoltck  
√Bolt Cmd Status (sixteen) - Complete  
√Bolt Pos (sixteen): 0 --- 51

NOTE

Steps (8 --- 16) verify secondary power/  
command path and deploy capture latches.

8. DEACTIVATE NADIR CBM PRIMARY MASTER CONTROLLER

Node 1 Nadir CBM Prep for Mate

sel Deactivate Nadir CBM

Node 1 Nadir CBM Deactivate CBM

**cmd** Deactivate  
Mode - Deactivated  
Master - None

9. CLOSE SECONDARY RPCs

Node 1 Nadir CBM Prep for Mate

sel RPC 11

RPCM N14B B RPC 11

**cmd** Close **Execute**  
√Position - Close

Node 1 Nadir CBM Prep for Mate

sel RPC 12

RPCM N14B B RPC 12

**cmd** Close **Execute**  
√Position - Close

Node 1 Nadir CBM Prep for Mate

sel RPC 13

RPCM N14B B RPC 13

**cmd** Close **Execute**  
√Position - Close

Node 1 Nadir CBM Prep for Mate

sel RPC 14

RPCM N14B B RPC 14

**cmd** Close **Execute**  
√Position - Close

10. OPEN PRIMARY RPCs

Node 1 Nadir CBM Prep for Mate

sel RPC 03

RPCM N13B B RPC 03

**cmd** Open **Execute**

√Position - Open

Node 1 Nadir CBM Prep for Mate

sel RPC 04

RPCM N13B B RPC 04

**cmd** Open **Execute**

√Position - Open

Node 1 Nadir CBM Prep for Mate

sel RPC 05

RPCM N13B B RPC 05

**cmd** Open **Execute**

√Position - Open

Node 1 Nadir CBM Prep for Mate

sel RPC 06

RPCM N13B B RPC 06

**cmd** Open **Execute**

√Position - Open

11. ACTIVATE NADIR CBM SECONDARY MASTER CONTROLLER

Node 1 Nadir CBM Prep for Mate

sel Activate Secondary Master

Node 1 Nadir CBM Act Sec Master

**cmd** Activate Secondary

√Mode - Activated

√Master - Secondary

√Master Cmd Status - Complete  
√Comm Error - No X

sel Built In Test Failures

Node 1 Active CBM Built In Test Failures

√No Xs

## 12. SET CONTROLLER POSITIONS ZERO

### NOTE

Command should be issued to use currently active RS-485 bus channel (A or B). Active channel is indicated in "485 Channel" telemetry field.

Node 1 Nadir CBM Prep for Mate

sel Initialize Controller Positions

Node 1 CBM Initialize Controller Positions

**cmd** Set All Positions to Zero Bus "X"

√Master Cmd Status - Complete

**cmd** Built-In Test

√Confirmation Request - Built-In Test

**cmd** Confirm Cmd

√Master Cmd Status - Complete

√Bolt Cmd Code (sixteen) - Built-In Test

√Latch Cmd Code (four) - Built-In Test

√Bolt Cmd Status (sixteen) - Complete

√Latch Cmd Status (four) - Complete

√Bolt Posn (sixteen) = 0

√Latch Posn (four) = 0

sel Built-In Test Failures

Node 1 Active CBM Built In Test Failures

√No Xs

## 13. CLOSE CAPTURE LATCHES

Node 1 Nadir CBM Prep for Mate

sel Close Capture Latches

Node 1 CBM Close Capture Latches

**cmd** Close

Wait 10 seconds.

√Confirmation Request - Close

**cmd** Confirm Cmd

√Master Cmd Status - Complete

√Cmd Code (four) - Close

√Cmd Status (four) - Complete

√Posn (four): 0 --- 1

14. SET LATCH ANGLES ZERO

NOTE

Command should be issued to use currently active RS-485 bus channel (A or B). Active channel is indicated in "485 Channel" telemetry field.

Node 1 Nadir CBM Prep for Mate

sel Set Latch Angles to Zero

Node 1 CBM Set Latch Angles to Zero

**cmd** Set Latch Angles to Zero Bus "X"

√Master Cmd Status - Complete

√Cmd Code (four) - Reload

√Cmd Status (four) - Complete

√Posn (four) = 0

15. DEPLOY CAPTURE LATCHES

Node 1 Nadir CBM Prep for Mate

sel Deploy Capture Latches

Node 1 CBM Deploy Capture Latches

**cmd** Deploy Nominal

Wait 80 seconds.

√Master Cmd Status - Complete

√Latch Cmd Code (four) - Close

√Latch Cmd Status (four) - Complete

√Latch Posn (four): 199 --- 200



16. CLOSE PRIMARY RPCs

Node 1 Nadir CBM Prep for Mate

sel RPC 03

RPCM N13B B RPC 03

**cmd** Close Execute

√Position - Close

Node 1 Nadir CBM Prep for Mate

sel RPC 04

RPCM N13B B RPC 04

**cmd** Close **Execute**

√Position - Close

Node 1 Nadir CBM Prep for Mate

sel RPC 05

RPCM N13B B RPC 05

**cmd** Close **Execute**

√Position - Close

Node 1 Nadir CBM Prep for Mate

sel RPC 06

RPCM N13B B RPC 06

**cmd** Close **Execute**

√Position - Close